

Title (en)

METHOD AND APPARATUS FOR PHOTO-EXCITATION OF CHEMICALS FOR ATOMIC LAYER DEPOSITION OF DIELECTRIC FILM

Title (de)

VERFAHREN UND VORRICHTUNG ZUR LICHTANREGUNG VON CHEMISCHEN STOFFEN FÜR ATOMSCHICHTABSCHIEDUNG EINES DIELEKTRISCHEN FILMS

Title (fr)

PROCEDE ET APPAREIL POUR LA PHOTO-EXCITATION DE PRODUITS CHIMIQUES POUR UN DEPOT PAR COUCHE ATOMIQUE D'UN FILM DIELECTRIQUE

Publication

**EP 2022084 A2 20090211 (EN)**

Application

**EP 07761753 A 20070502**

Priority

- US 2007068043 W 20070502
- US 38197006 A 20060505
- US 46412106 A 20060811

Abstract (en)

[origin: US2007259111A1] The invention generally provides a method for depositing materials, and more particularly, embodiments of the invention relate to chemical vapor deposition processes and atomic layer deposition processes utilizing photoexcitation techniques to deposit barrier layers, seed layers, conductive materials, and dielectric materials. Embodiments of the invention generally provide methods of the assisted processes and apparatuses, in which the assisted processes may be conducted for providing uniformly deposited material.

IPC 8 full level

**H01L 21/31** (2006.01); **C30B 23/00** (2006.01)

CPC (source: EP KR US)

**C23C 16/0209** (2013.01 - EP US); **C23C 16/0245** (2013.01 - EP US); **C23C 16/045** (2013.01 - EP US); **C23C 16/34** (2013.01 - EP US); **C23C 16/403** (2013.01 - EP US); **C23C 16/405** (2013.01 - EP US); **C23C 16/4405** (2013.01 - EP US); **C23C 16/45504** (2013.01 - EP KR US); **C23C 16/45508** (2013.01 - EP KR US); **C23C 16/45574** (2013.01 - EP US); **C23C 16/45591** (2013.01 - EP US); **C23C 16/4583** (2013.01 - EP US); **C23C 16/4584** (2013.01 - KR); **C23C 16/46** (2013.01 - EP KR US); **C23C 16/482** (2013.01 - EP US); **C23C 16/509** (2013.01 - EP KR US); **H01J 37/32009** (2013.01 - EP KR US); **H05H 1/24** (2013.01 - US)

Citation (search report)

See references of WO 2007131040A2

Designated contracting state (EPC)

NL

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**US 2007259111 A1 20071108**; CN 101438391 A 20090520; CN 101438391 B 20130410; CN 103215570 A 20130724; EP 2022084 A2 20090211; JP 2009536267 A 20091008; JP 2013241678 A 20131205; JP 5301430 B2 20130925; KR 101046071 B1 20110701; KR 20090007486 A 20090116; TW 200801228 A 20080101; TW 201315836 A 20130416; TW I404816 B 20130811; WO 2007131040 A2 20071115; WO 2007131040 A3 20080110

DOCDB simple family (application)

**US 46412106 A 20060811**; CN 200780016253 A 20070502; CN 201310103526 A 20070502; EP 07761753 A 20070502; JP 2009510052 A 20070502; JP 2013128588 A 20130619; KR 20087029816 A 20070502; TW 102100477 A 20070504; TW 96115995 A 20070504; US 2007068043 W 20070502